

RESPONSE

Serial Number: 10/034,404

Filing Date: 28 December 2001

Title: Method and apparatus for monitoring work vehicles

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CLAIMS

Please substitute the following claim listing for the claim listing currently in the subject application. In the claims below all insertions are identified by underlines and all deletions are identified by ~~strike-throughs~~ or [[double brackets]]. Any other changes other than those identified are unintentional and in error.

1. (Currently Amended) A monitoring system for a vehicle, comprising:

a diagnostic system configured to receive sensor information from at least one sensor mounted on the vehicle;

a vehicle operator interface configured to receive input from a vehicle operator and to display a plurality of prompts to the vehicle operator according to a predetermined algorithm;

a wireless communication device on board the vehicle ~~configured to transmit a cellular telephone signal~~, the wireless communication device coupled to the diagnostic system to communicate said sensor information from the diagnostic system and coupled to the vehicle operator interface to communicate said input from the vehicle operator interface;

a remote central data center in wireless communication with the wireless communication device and receiving said sensor information and said input from the vehicle operator interface; and

a communications network coupled to the remote central data center,

wherein the input from the vehicle operator interface is responsive to at least one computer-generated question ^{generated according to a predetermined decision tree algorithm}

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2. (Currently Amended) The monitoring system[[s]] of claim 1, further comprising:
a technical support group interface coupled to the communications network.
 3. (Original) The monitoring system of claim 1, further comprising:
a fleet management information center interface coupled to the communications network.
 4. (Original) The monitoring system of claim 1, further comprising:
an equipment maintenance center interface coupled to the communications network.
 5. (Original) The monitoring system of claim 1, further comprising:
a dealer service center interface coupled to the communications network.
 6. (Currently Amended) An off-highway work vehicle comprising:
a diagnostic system configured to receive sensor information from at least one vehicle sensor mounted on the off-highway work vehicle;
an operator interface configured to receive input from a vehicle operator and to display a plurality of prompts to the vehicle operator according to a predetermined algorithm; [[and]]
an onboard fleet management system coupled to the diagnostic system to receive said sensor information from the diagnostic system and coupled to the operator interface to receive said input from the operator interface; and

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a wireless communication device coupled to the onboard fleet management system to communicate said sensor information and said operator input from the operator interface to a data receiver;

and [^] wherein said operator input is responsive to at least one computer-generated question, [^] according to a predetermined decision tree algorithm

~~wherein the wireless communication device comprises a modem and transmitter coupled to the onboard fleet management system, and~~

~~wherein the transmitter is configured to transmit a cellular telephone signal.~~

7. (Previously Presented) The off-highway work vehicle of claim 6 wherein the onboard fleet management system further comprises:

a microprocessor configured to receive said sensor information from the diagnostic system and said operator input from the operator interface.

8-9. (Cancelled)

10. (Currently Amended) The off-highway work vehicle of claim ~~[[8]]~~ 6 wherein the transmitter is configured to transmit a satellite communications signal.

11. (Original) The off-highway work vehicle of claim 6 wherein the operator prompts are a succession of questions for the operator and wherein the operator interface is configured to accept responses to the operator prompts.

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12. (Original) The off-highway work vehicle of claim 11 wherein the predetermined algorithm is a decision tree and wherein the responses are stored as a data character string.

13. (Original) The off-highway work vehicle of claim 6 wherein the data receiver is a remote central data center.

14-15. (Cancelled)

16. (Currently Amended) ~~The method of claim 15~~ A method for monitoring a work vehicle comprising:

retrieving inputs from an operator on the vehicle;

retrieving sensor information from at least one sensor connected to the vehicle;

running a diagnostics algorithm configured to provide diagnostics information based on at least some of the inputs from the operator and the sensor information; and

communicating the diagnostics information to a data receiver via a wireless communication data link,

wherein the at least some of the inputs are provided in response to at least one computer-generated question, the question generated according to a predetermined ^{decision tree} algorithm,

^{and} wherein the data receiver is a remote data center, and

~~wherein the step of retrieving inputs from an operator uses includes the step of using a decision tree algorithm to determine decision tree data.~~

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17. (Original) The method of claim 16 wherein the diagnostics information is the decision tree data.
18. (Currently Amended) A fleet management system for a work vehicle comprising:
- a microprocessor on the work vehicle;
 - an operator interface on-board the work vehicle coupled to the microprocessor and configured to receive inputs from a vehicle operator;
 - a diagnostics algorithm configured to provide diagnostics information based on the inputs received from the operator; and
 - a wireless data link configured to communicate the diagnostics information to a remote data receiver,
- wherein the operator inputs are responsive to at least one computer-generated question, the question generated according to a predetermined decision tree algorithm.
19. (Original) The fleet management system of claim 18 further comprising:
- at least one vehicle sensor coupled to the vehicle and configured to supply sensor information to the diagnostics algorithm.
20. (Previously Presented) The fleet management system of claim 18 wherein the wireless communication device data link further comprises:
- a modem coupled to the microprocessor and a transmitter coupled to the modem.

21-22. (Cancelled)

23. (Currently Amended) ~~The fleet management system of claim 22~~ A fleet management system for a work vehicle comprising:

a microprocessor on the work vehicle;

an operator interface on-board the work vehicle coupled to the microprocessor and configured to receive inputs from a vehicle operator;

a diagnostics algorithm configured to provide diagnostics information based on the inputs received from the operator; and

a wireless data link configured to communicate the diagnostics information to a remote data receiver,

wherein the operator inputs are responsive to at least one computer-generated question, the question generated according to a predetermined ^{decision tree} algorithm,

wherein the operator interface is configured to display a plurality of operator questions,

^{and} wherein the operator interface is configured to accept responses to the operator questions, and

~~wherein the plurality of operator questions are derived from a decision tree.~~

24. (Original) The fleet management system of claim 23 wherein the responses are stored as a data character string.

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25. (New) The monitoring system of claim 1 wherein the diagnostic system is configured to store diagnostic information for download to a portable computer service tool.
26. (New) The fleet management system of claim 19 wherein the sensor is selected from the group consisting of a GPS receiver, an hour meter, a draft force sensor, and a slip control sensor.
27. (New) The monitoring system of claim 1 wherein the remote central data center is configured to communicate ^{paid} sensor information via the Internet.
28. (New) The method of monitoring a work vehicle of claim 16 wherein the step of communicating occurs as scheduled feedback.
29. (New) The monitoring system of claim 25 wherein the service tool includes a modem, and the service tool is configured to communicate via cellular telephone signal.
30. (New) The monitoring system of claim 1 wherein the remote central data center is configured to communicate via cellular telephone signal.